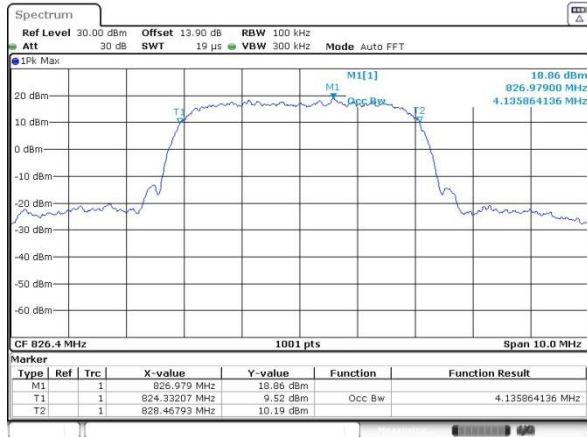




WCDMA Band V (RMC 12.2Kbps)

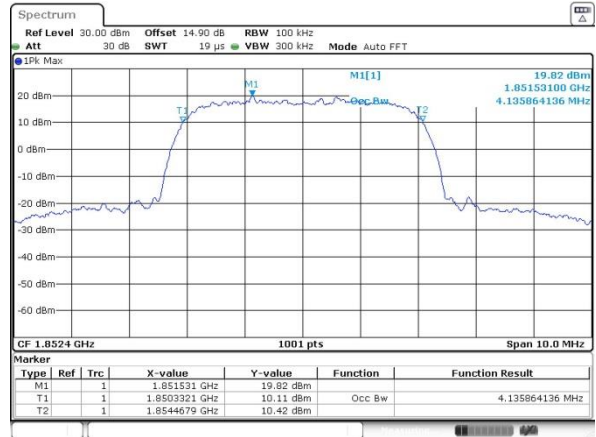
Lowest Channel



Date: 7 SEP 2019 13:28:26

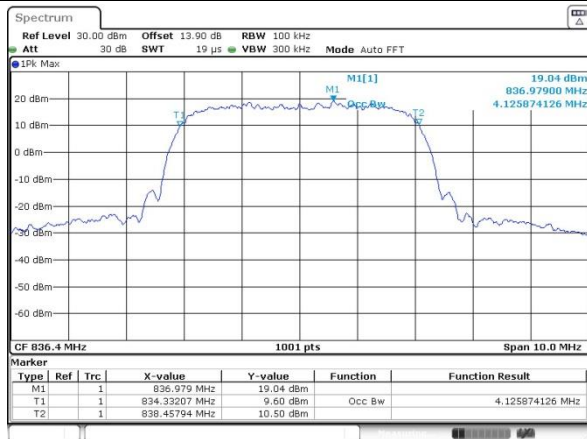
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



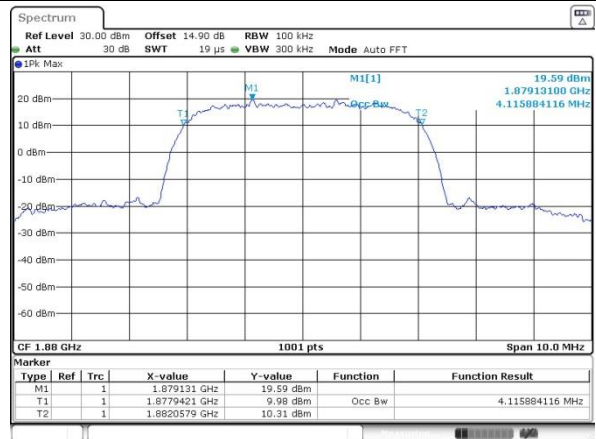
Date: 7 SEP 2019 13:36:57

Middle Channel



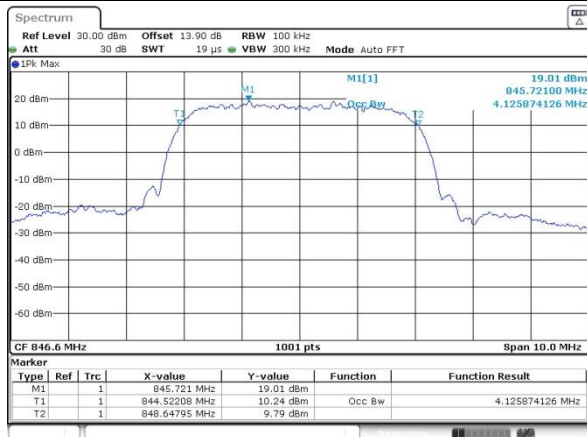
Date: 7 SEP 2019 13:28:46

Middle Channel



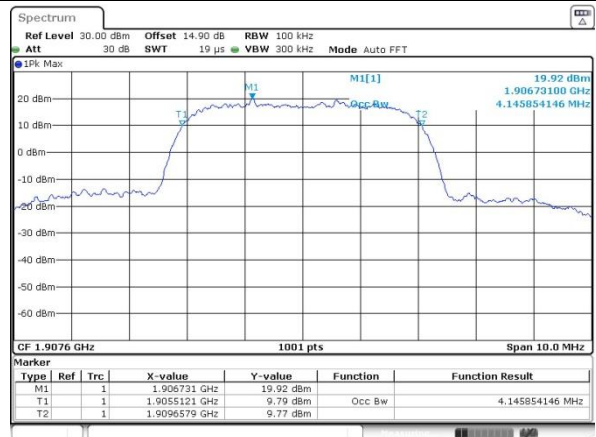
Date: 7 SEP 2019 13:37:18

Highest Channel



Date: 7 SEP 2019 13:29:10

Highest Channel

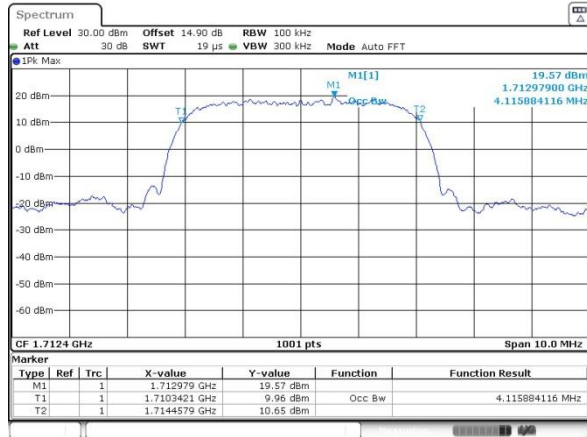


Date: 7 SEP 2019 13:37:38

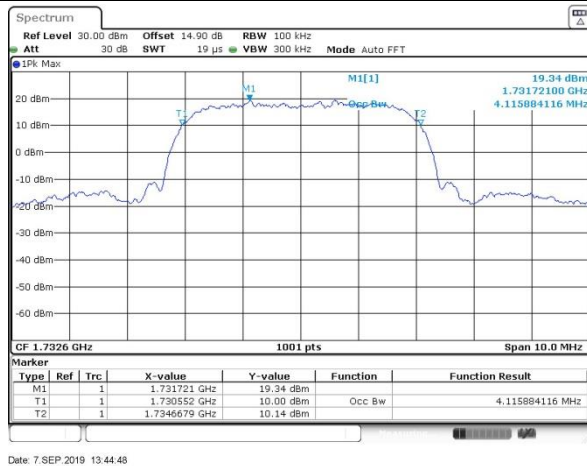


WCDMA Band IV (RMC 12.2Kbps)

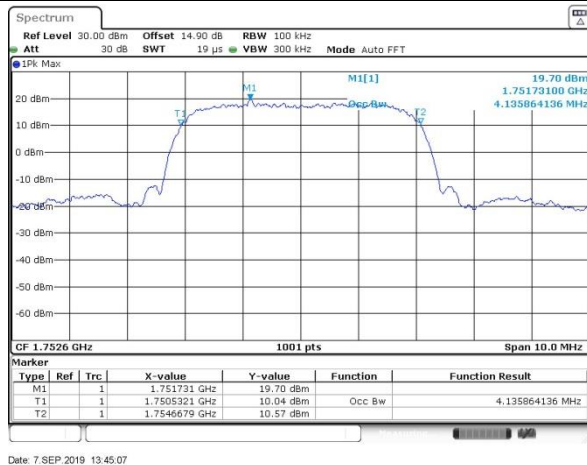
Lowest Channel



Middle Channel

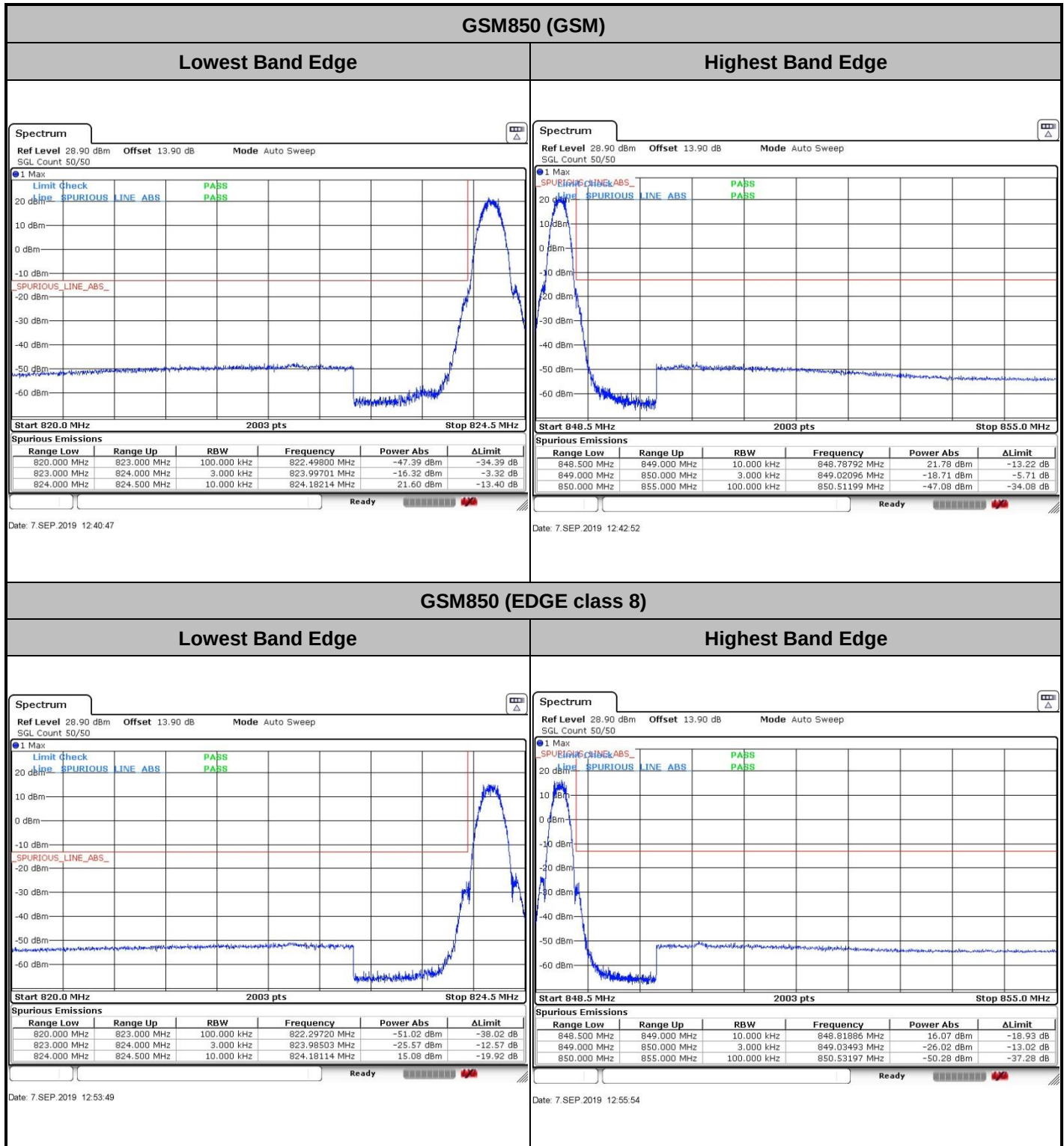


Highest Channel





Conducted Band Edge

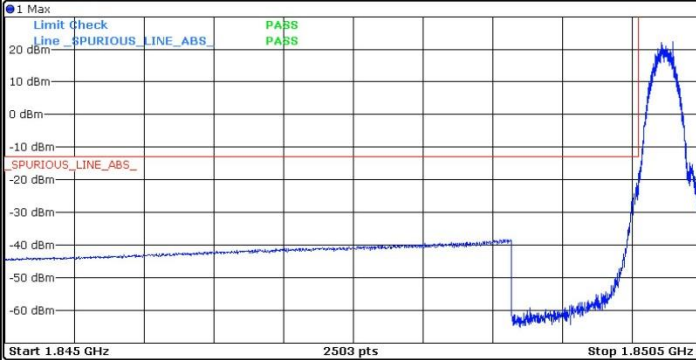




GSM1900 (GSM)

Lowest Band Edge

Spectrum

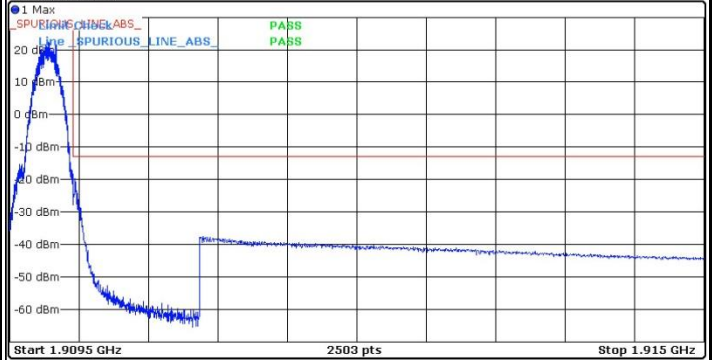
Ref Level 29.90 dBm Offset 14.90 dB Mode Auto Sweep
SGL Count 50/50

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.845 GHz	1.849 GHz	1.000 MHz	1.84895 GHz	-38.32 dBm	-25.32 dB
1.849 GHz	1.850 GHz	3.000 kHz	1.84998 GHz	-20.93 dBm	-7.93 dB
1.850 GHz	1.851 GHz	10.000 kHz	1.85027 GHz	22.39 dBm	-12.61 dB

Date: 7.SEP.2019 13:06:06

Highest Band Edge

Spectrum

Ref Level 29.90 dBm Offset 14.90 dB Mode Auto Sweep
SGL Count 50/50

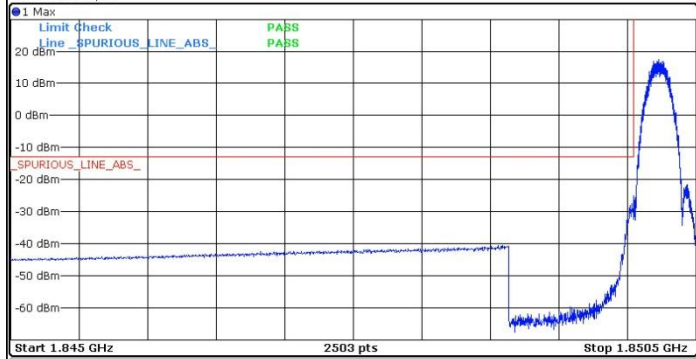
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.909 GHz	1.910 GHz	10.000 kHz	1.90981 GHz	22.25 dBm	-12.75 dB
1.910 GHz	1.911 GHz	3.000 kHz	1.91002 GHz	-19.80 dBm	-6.80 dB
1.911 GHz	1.915 GHz	1.000 MHz	1.91103 GHz	-37.71 dBm	-24.71 dB

Date: 7.SEP.2019 13:07:49

GSM1900 (EDGE class 8)

Lowest Band Edge

Spectrum

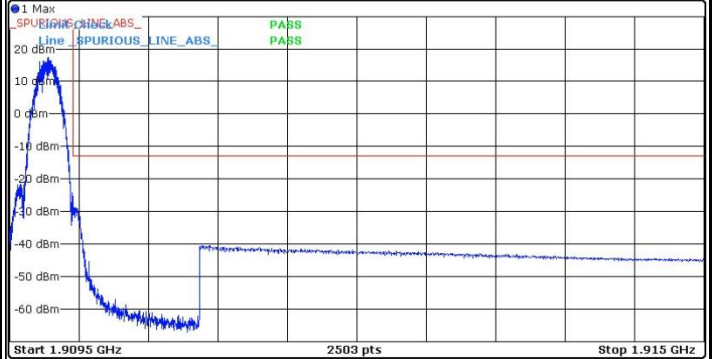
Ref Level 29.90 dBm Offset 14.90 dB Mode Auto Sweep
SGL Count 50/50

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.845 GHz	1.849 GHz	1.000 MHz	1.84895 GHz	-40.65 dBm	-27.65 dB
1.849 GHz	1.850 GHz	3.000 kHz	1.84999 GHz	-27.63 dBm	-14.63 dB
1.850 GHz	1.851 GHz	10.000 kHz	1.85020 GHz	17.36 dBm	-17.64 dB

Date: 7.SEP.2019 13:15:40

Highest Band Edge

Spectrum

Ref Level 29.90 dBm Offset 14.90 dB Mode Auto Sweep
SGL Count 50/50

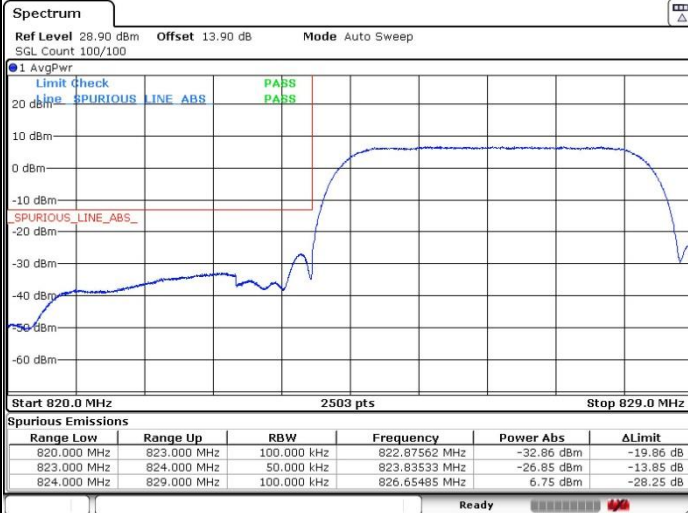
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.909 GHz	1.910 GHz	10.000 kHz	1.90981 GHz	17.46 dBm	-17.46 dB
1.910 GHz	1.911 GHz	3.000 kHz	1.91001 GHz	-28.83 dBm	-15.83 dB
1.911 GHz	1.915 GHz	1.000 MHz	1.91109 GHz	-40.54 dBm	-27.54 dB

Date: 7.SEP.2019 13:17:24



WCDMA Band V (RMC 12.2Kbps)

Lowest Band Edge



Date: 7 SEP. 2019 13:30:08

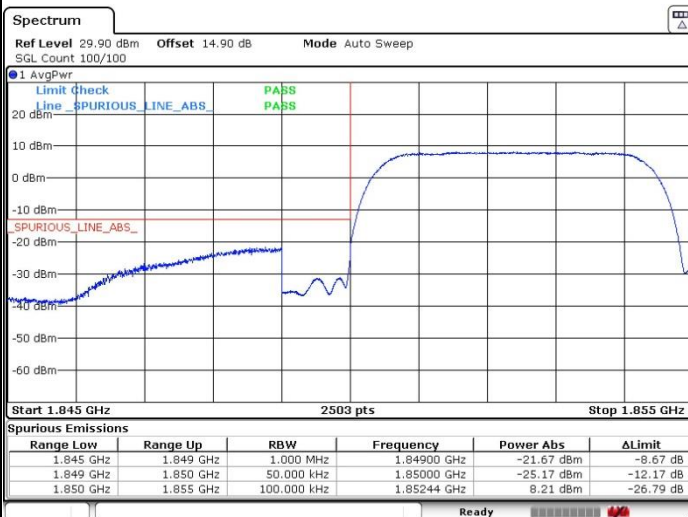
Highest Band Edge



Date: 7 SEP. 2019 13:31:04

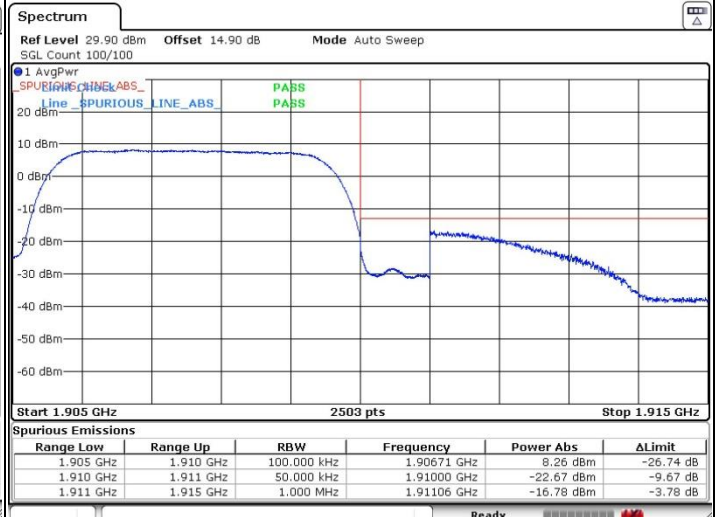
WCDMA Band II (RMC 12.2Kbps)

Lowest Band Edge



Date: 7 SEP. 2019 13:38:52

Highest Band Edge



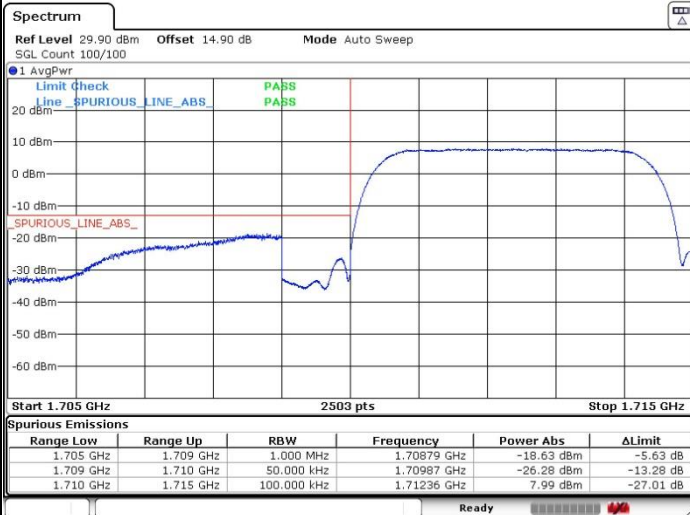
Date: 7 SEP. 2019 13:39:42



WCDMA Band IV (RMC 12.2Kbps)

Lowest Band Edge

Highest Band Edge



Date: 7 SEP. 2019 13:47:21



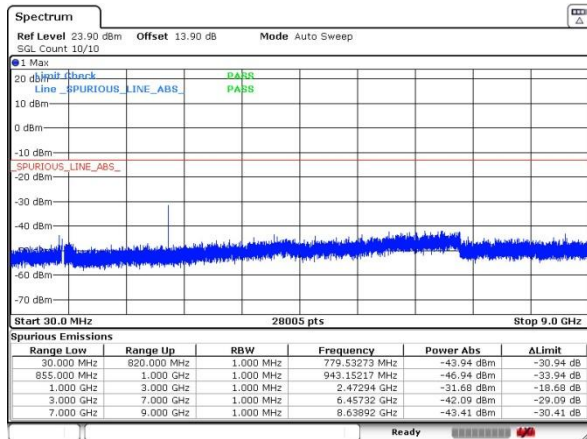
Date: 7 SEP. 2019 13:48:28



Conducted Spurious Emission

GSM850 (GSM)

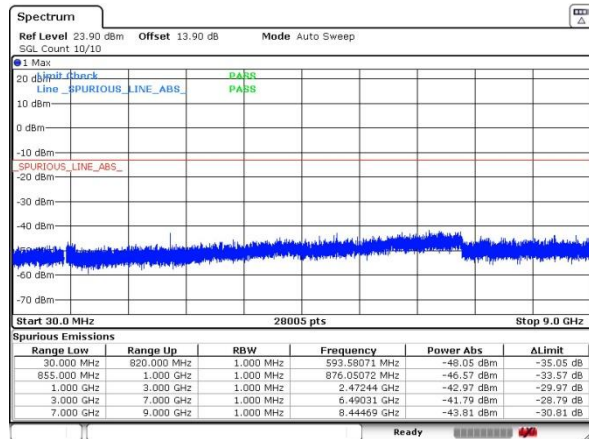
Lowest Channel



Date: 7 SEP 2019 12:43:22

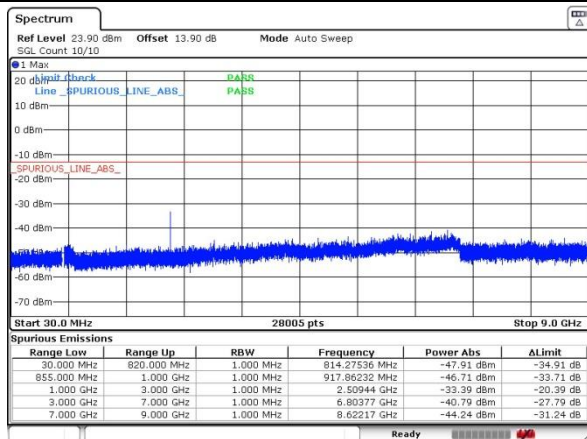
GSM850 (EDGE class 8)

Lowest Channel



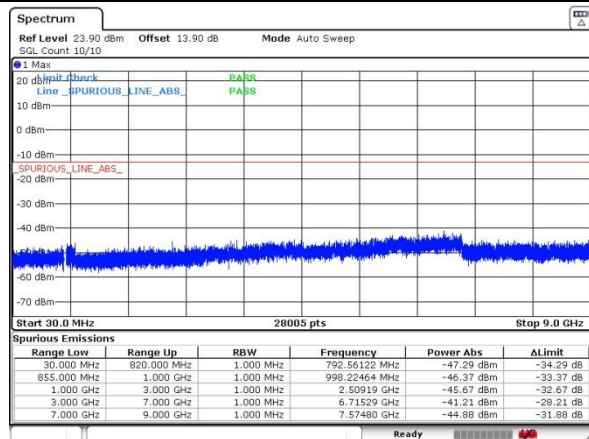
Date: 7 SEP 2019 12:56:23

Middle Channel



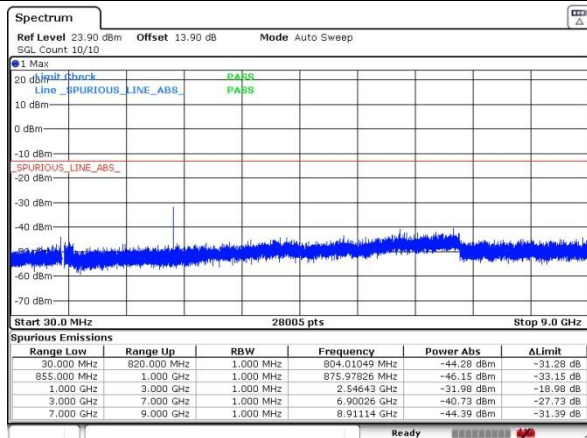
Date: 7 SEP 2019 12:43:43

Middle Channel



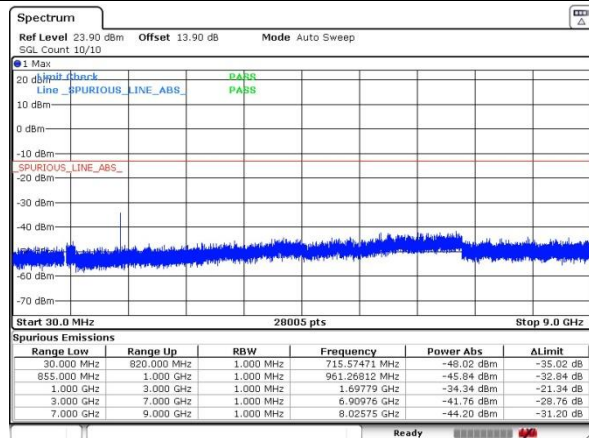
Date: 7 SEP 2019 12:56:40

Highest Channel



Date: 7 SEP 2019 12:44:03

Highest Channel

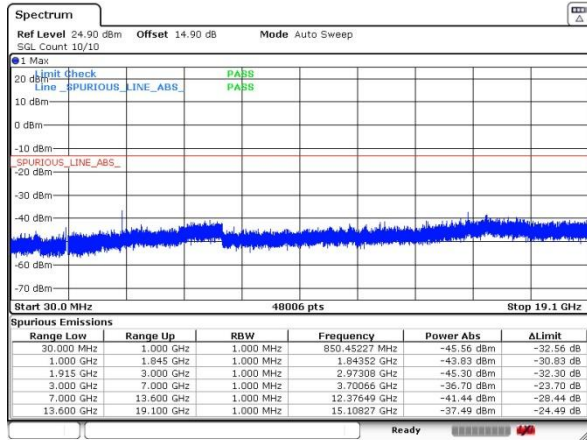


Date: 7 SEP 2019 12:56:57



GSM1900 (GSM)

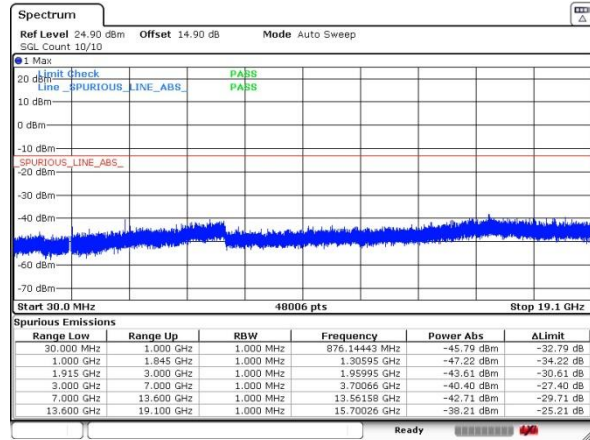
Lowest Channel



Date: 7 SEP 2019 13:08:12

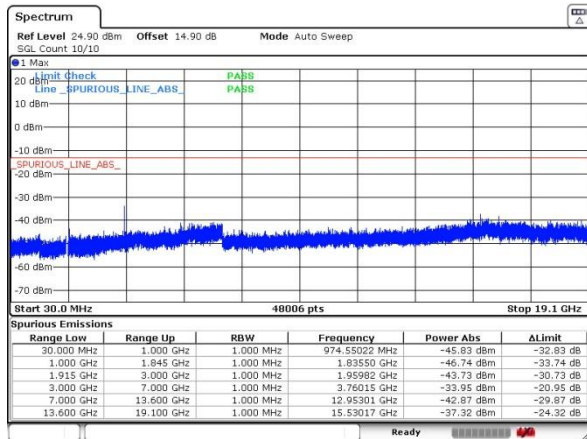
GSM1900 (EDGE class 8)

Lowest Channel



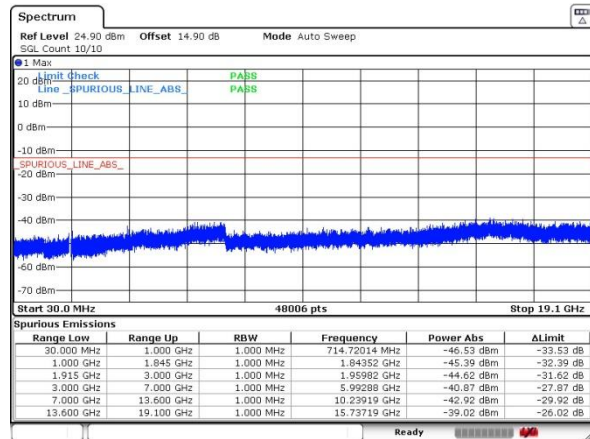
Date: 7 SEP 2019 13:17:53

Middle Channel



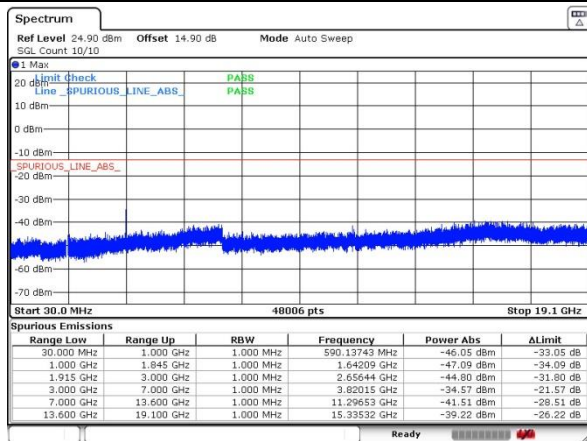
Date: 7 SEP 2019 13:08:30

Middle Channel



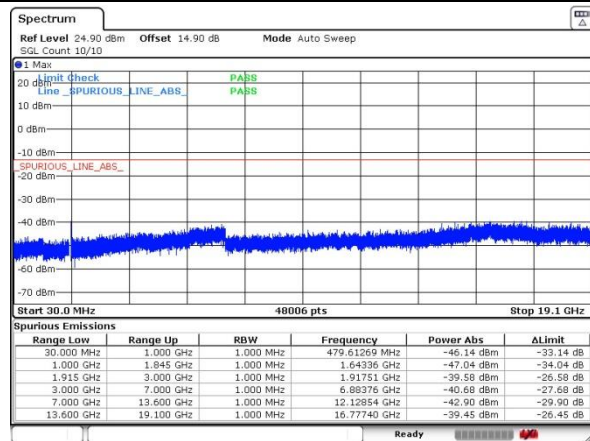
Date: 7 SEP 2019 13:18:12

Highest Channel



Date: 7 SEP 2019 13:08:44

Highest Channel

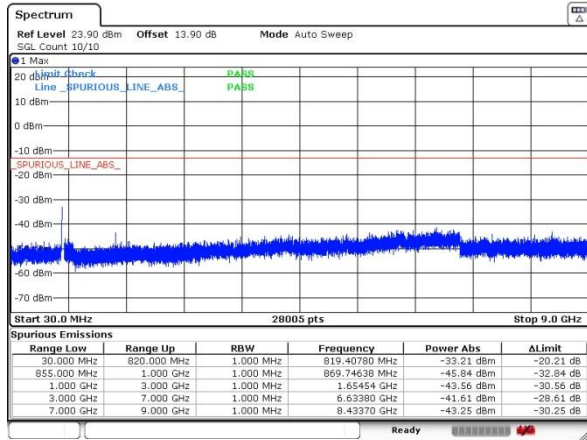


Date: 7 SEP 2019 13:18:27



WCDMA Band V (RMC 12.2Kbps)

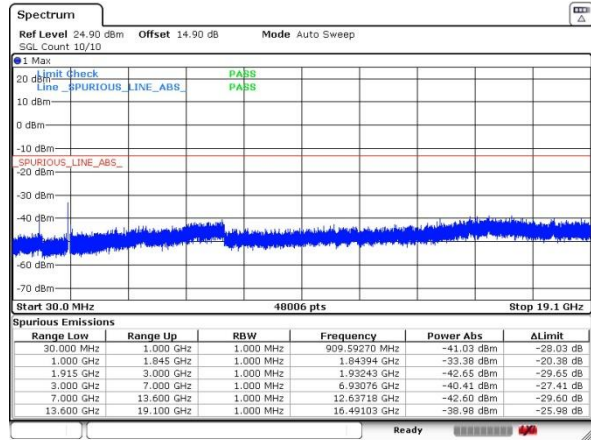
Lowest Channel



Date: 7.SEP.2019 13:31:31

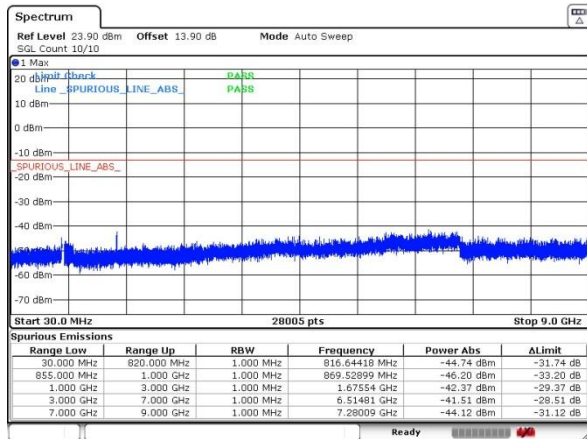
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



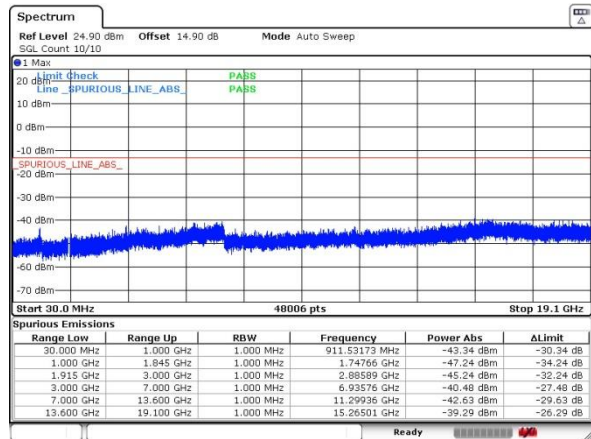
Date: 7.SEP.2019 13:40:14

Middle Channel



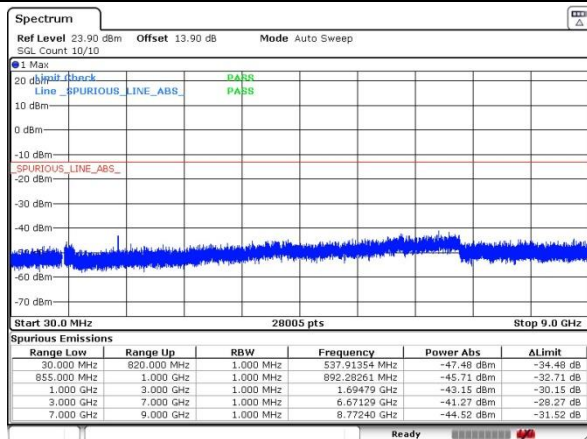
Date: 7.SEP.2019 13:31:50

Middle Channel



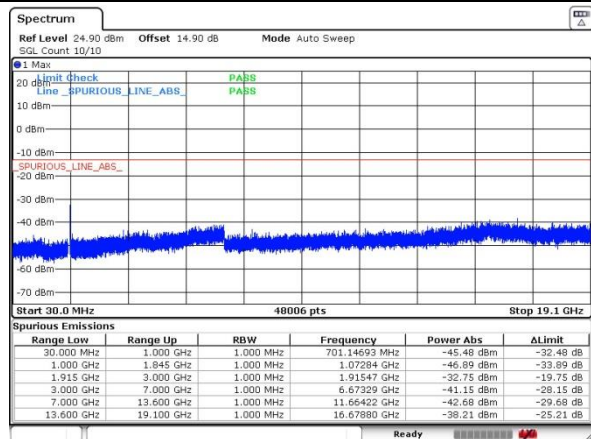
Date: 7.SEP.2019 13:40:35

Highest Channel



Date: 7.SEP.2019 13:32:09

Highest Channel

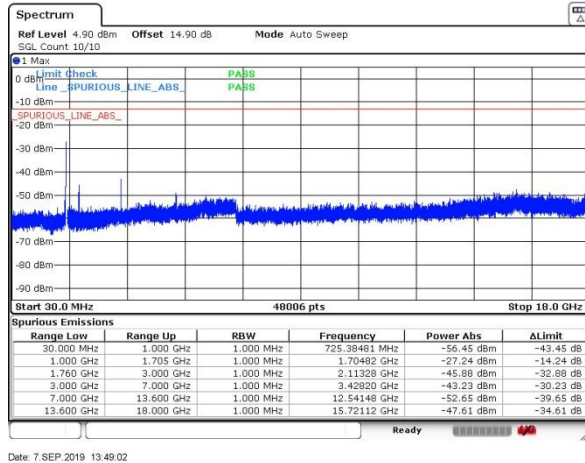


Date: 7.SEP.2019 13:40:53



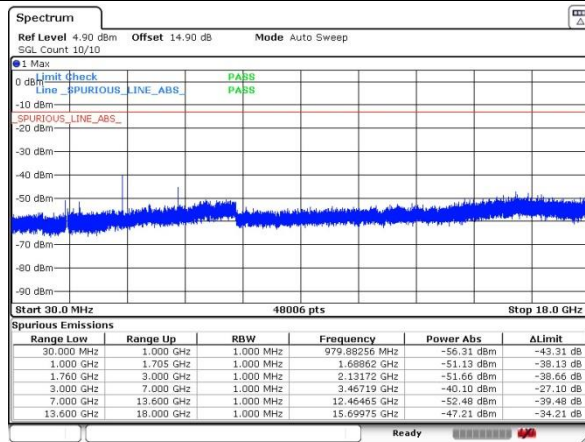
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



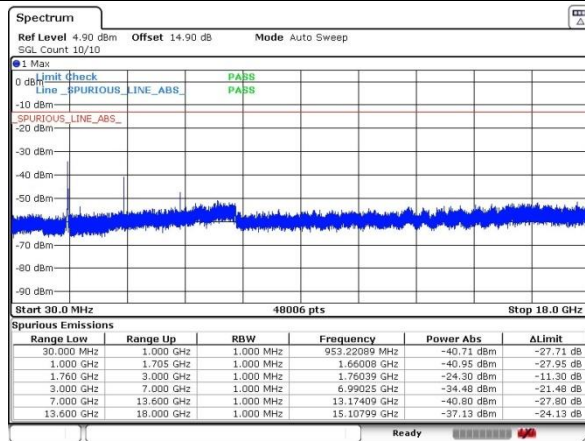
Date: 7 SEP 2019 13:49:02

Middle Channel



Date: 7 SEP 2019 13:49:24

Highest Channel



Date: 7 SEP 2019 13:50:26

**Frequency Stability**

Test Conditions	Middle Channel	GSM850 (GSM)	GSM850 (EDGE class 8)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0191	0.0275	PASS
40	Normal Voltage	0.0215	0.0239	
30	Normal Voltage	0.0251	0.0084	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0263	0.0167	
0	Normal Voltage	0.0024	0.0132	
-10	Normal Voltage	0.0108	0.0179	
-20	Normal Voltage	0.0251	0.0060	
-30	Normal Voltage	0.0048	0.0108	
20	Maximum Voltage	0.0191	0.0155	
20	Normal Voltage	0.0024	0.0203	
20	Battery End Point	0.0096	0.0036	

Note:

1. Normal Voltage = 3.85V ; Battery End Point (BEP) =3.7V. ; Maximum Voltage =4.4V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



Test Conditions	Middle Channel	GSM1900 (GSM)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0037	0.0170	PASS
40	Normal Voltage	0.0016	0.0133	
30	Normal Voltage	0.0027	0.0021	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0101	0.0106	
0	Normal Voltage	0.0005	0.0133	
-10	Normal Voltage	0.0090	0.0154	
-20	Normal Voltage	0.0027	0.0122	
-30	Normal Voltage	0.0128	0.0117	
20	Maximum Voltage	0.0069	0.0027	
20	Normal Voltage	0.0016	0.0138	
20	Battery End Point	0.0128	0.0027	

Note:

1. Normal Voltage = 3.85V ; Battery End Point (BEP) =3.7V. ; Maximum Voltage =4.4V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



Test Conditions	Middle Channel	WCDMA Band V (RMC 12.2KbpsRMC 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0263	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0167	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0155	
0	Normal Voltage	0.0024	
-10	Normal Voltage	0.0120	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0084	
20	Maximum Voltage	0.0120	
20	Normal Voltage	0.0215	
20	Battery End Point	0.0036	

Note:

1. Normal Voltage = 3.85V ; Battery End Point (BEP) =3.7V. ; Maximum Voltage =4.4V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0005	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0043	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0059	
0	Normal Voltage	0.0080	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0090	
-30	Normal Voltage	0.0144	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0128	
20	Battery End Point	0.0005	

Note:

1. Normal Voltage = 3.85V ; Battery End Point (BEP) =3.7V. ; Maximum Voltage =4.4V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0122	PASS
40	Normal Voltage	0.0305	
30	Normal Voltage	0.0098	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0244	
0	Normal Voltage	0.0329	
-10	Normal Voltage	0.0317	
-20	Normal Voltage	0.0207	
-30	Normal Voltage	0.0293	
20	Maximum Voltage	0.0146	
20	Normal Voltage	0.0402	
20	Battery End Point	0.0341	

Note:

1. Normal Voltage = 3.85V ; Battery End Point (BEP) =3.7V. ; Maximum Voltage =4.4V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

Pre-scanned in three orthogonal panels, X, Y, Z for WWAN Bottom / Top Antenna. The worse cases (Bottom Antenna) were recorded in this report.

GSM850 (GSM)								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672	-44.30	-13	-31.30	-51.27	1.58	10.70	H
	2510	-34.44	-13	-21.44	-42.69	2.102	12.50	H
	3348	-64.19	-13	-51.19	-73.08	2.856	13.90	H
	1672	-51.35	-13	-38.35	-58.32	1.58	10.70	V
	2510	-40.29	-13	-27.29	-48.54	2.10	12.50	V
	3348	-64.07	-13	-51.07	-72.96	2.86	13.90	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

GSM850 (EDGE class 8)								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672	-65.60	-13	-52.60	-72.57	1.58	10.70	H
	2510	-63.85	-13	-50.85	-72.10	2.102	12.50	H
	3348	-64.88	-13	-51.88	-73.77	2.856	13.90	H
	1672	-66.43	-13	-53.43	-73.40	1.58	10.70	V
	2510	-63.86	-13	-50.86	-72.11	2.10	12.50	V
	3348	-64.26	-13	-51.26	-73.15	2.86	13.90	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

GSM1900 (GSM)								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3759	-47.47	-13	-34.47	-59.73	2.641	14.90	H
	5640	-55.49	-13	-42.49	-67.35	2.94	14.80	H
	7524	-50.19	-13	-37.19	-59.96	3.39	13.16	H
	3759	-50.75	-13	-37.75	-63.01	2.64	14.90	V
	5640	-54.51	-13	-41.51	-66.37	2.94	14.80	V
	7524	-49.80	-13	-36.80	-59.57	3.39	13.16	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

GSM1900 (EDGE class 8)								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3759	-48.39	-13	-35.39	-60.65	2.641	14.90	H
	5640	-55.75	-13	-42.75	-67.61	2.94	14.80	H
	7524	-50.52	-13	-37.52	-60.29	3.39	13.16	H
	3759	-50.02	-13	-37.02	-62.28	2.64	14.90	V
	5640	-55.25	-13	-42.25	-67.11	2.94	14.80	V
	7524	-49.58	-13	-36.58	-59.35	3.39	13.16	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA Band V(RMC 12.2Kbps)								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672	-67.69	-13	-54.69	-74.66	1.58	10.70	H
	2510	-63.64	-13	-50.64	-71.89	2.102	12.50	H
	3348	-64.57	-13	-51.57	-73.46	2.856	13.90	H
	1672	-68.03	-13	-55.03	-75.00	1.58	10.70	V
	2510	-64.09	-13	-51.09	-72.34	2.10	12.50	V
	3348	-64.46	-13	-51.46	-73.35	2.86	13.90	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA Band II(RMC 12.2Kbps)								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3759	-57.66	-13	-44.66	-69.92	2.641	14.90	H
	5640	-55.68	-13	-42.68	-67.54	2.94	14.80	H
	7524	-50.05	-13	-37.05	-59.82	3.39	13.16	H
	3759	-57.27	-13	-44.27	-69.53	2.64	14.90	V
	5640	-54.84	-13	-41.84	-66.70	2.94	14.80	V
	7524	-49.78	-13	-36.78	-59.55	3.39	13.16	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



WCDMA Band IV(RMC 12.2Kbps)								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3465	-62.42	-13	-49.42	-73.16	2.604	13.34	H
	5199	-56.98	-13	-43.98	-67.49	3.011	13.52	H
	6936	-52.85	-13	-39.85	-63.05	3.271	13.47	H
	3465	-61.92	-13	-48.92	-72.66	2.604	13.34	V
	5199	-56.46	-13	-43.46	-66.97	3.011	13.52	V
	6936	-52.23	-13	-39.23	-62.43	3.271	13.47	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.